

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P545466

Luminaire Tested: **FMR-12-2-LD4-1STD-40-UNV-80-87-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P545466  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/15/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-12-2-LD4-1STD-40-UNV-80-87-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

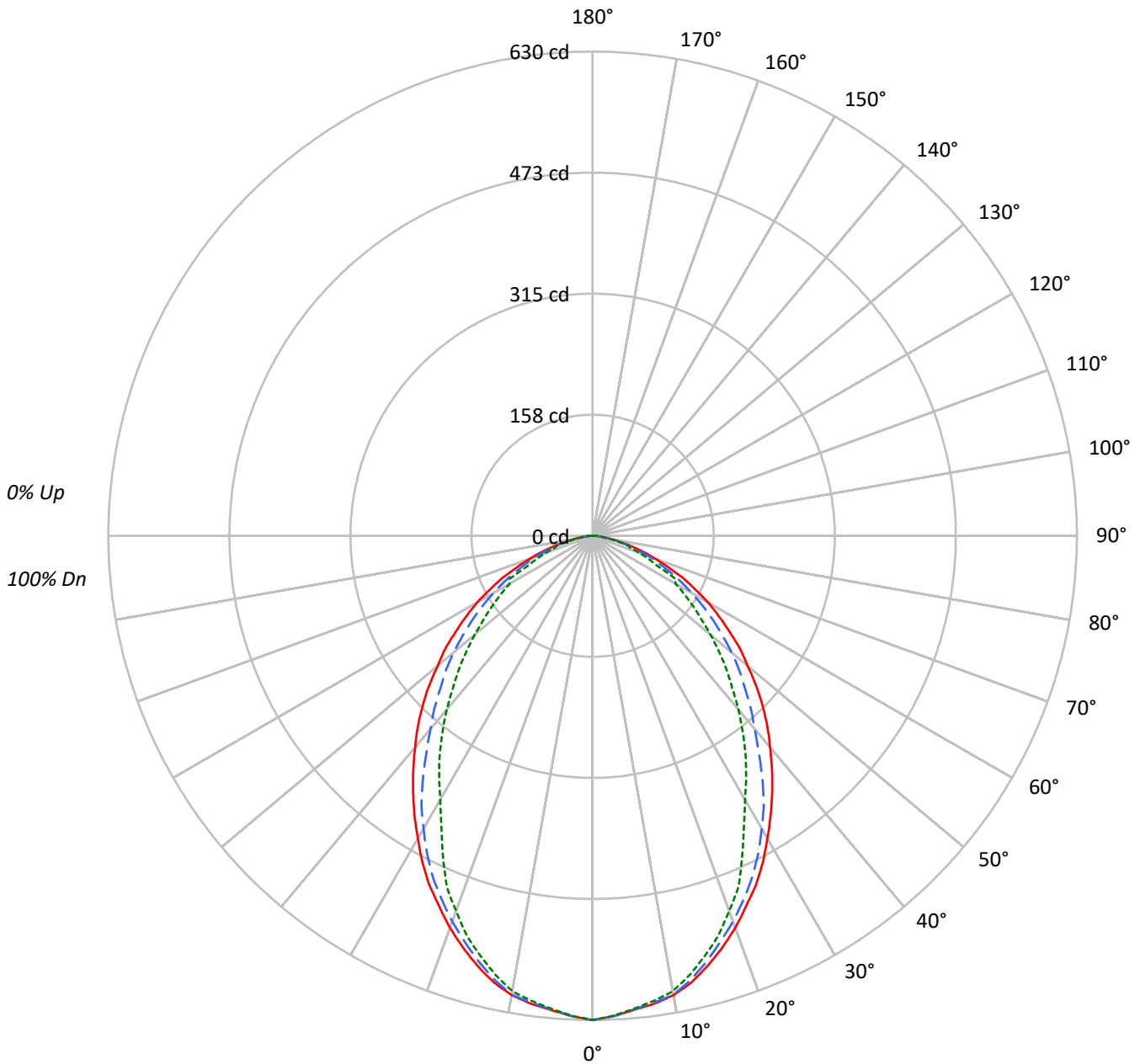
Lumens per Lamp: N/A  
Luminaire Lumens: 1237.0 lumens  
Efficiency: N/A  
Efficacy: 74.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3391	3391	3391
5°	3345	3341	3337
10°	3316	3312	3288
15°	3227	3194	3150
20°	3108	3058	2975
25°	2980	2916	2734
30°	2825	2734	2463
35°	2675	2527	2278
40°	2523	2303	2073
45°	2379	2129	1874
50°	2202	1976	1671
55°	2037	1791	1497
60°	1866	1600	1341
65°	1642	1401	1187
70°	1353	1226	1009
75°	1075	940	984
80°	722	679	632
85°	451	537	630



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.7	4.7
10°-20°	161.0	13.0
20°-30°	222.9	18.0
30°-40°	237.6	19.2
40°-50°	216.8	17.5
50°-60°	169.8	13.7
60°-70°	110.7	8.9
70°-80°	49.0	4.0
80°-90°	10.5	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	442.5	35.8
0°-40°	680.1	55.0
0°-60°	1066.7	86.2
0°-90°	1237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1237.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	630	630	630	630	630	
5°	619	618	618	618	618	59
15°	579	579	573	568	565	163
25°	502	499	491	474	460	230
35°	407	404	385	356	347	255
45°	312	306	280	256	246	241
55°	217	210	191	168	160	195
65°	129	122	110	112	93	127
75°	52	48	45	43	47	55
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	630.1	630.1	630.1	630.1	630.1
2.5°	625.7	625.7	625.7	625.0	625.0
5°	619.2	618.5	618.5	617.7	617.7
7.5°	614.1	613.4	612.6	611.9	610.4
10°	606.8	606.8	606.1	602.4	601.7
12.5°	595.1	594.4	591.5	586.4	584.9
15°	579.1	579.1	573.3	567.5	565.3
17.5°	561.6	560.9	553.6	547.8	544.9
20°	542.7	541.2	534.0	524.5	519.4
22.5°	521.6	521.6	512.8	500.4	495.3
25°	501.9	499.0	491.0	473.5	460.4
27.5°	479.3	475.0	466.2	441.4	426.1
30°	454.6	452.4	440.0	407.9	396.3
32.5°	431.2	427.6	414.5	381.0	371.5
35°	407.2	404.3	384.6	355.5	346.7
37.5°	383.2	379.5	354.8	331.4	320.5
40°	359.1	354.8	327.8	306.7	295.0
42.5°	336.5	330.7	304.5	281.9	268.8
45°	312.5	305.9	279.7	256.4	246.2
47.5°	288.5	282.6	258.6	234.6	222.9
50°	263.0	257.9	236.0	212.0	199.6
52.5°	241.8	233.8	212.7	188.7	178.5
55°	217.1	210.5	190.9	168.3	159.5
57.5°	194.5	187.9	169.7	148.6	141.3
60°	173.4	163.9	148.6	130.4	124.6
62.5°	150.1	142.8	129.7	114.4	121.7
65°	128.9	121.7	110.0	112.2	93.2
67.5°	105.6	102.0	91.8	81.6	78.7
70°	86.0	81.6	77.9	67.0	64.1
72.5°	68.5	64.1	59.0	53.2	51.0
75°	51.7	48.1	45.2	43.0	47.3
77.5°	35.7	34.2	32.1	29.9	29.1
80°	23.3	22.6	21.9	21.1	20.4
82.5°	13.8	13.8	13.8	13.8	13.8
85°	7.3	8.0	8.7	9.5	10.2
87.5°	4.4	4.4	5.1	5.8	6.6
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)